

REMARKS

Claims 1-4, 9 and 12-13 were examined in the Final Office Action mailed August 8, 2007. The following objections and rejections are pending:

- Objection to lack of identification of the foreign priority application in the Oath/Declaration.
- Rejection of claims 1, 3-4 and 9 under 35 U.S.C. § 102(b) as anticipated by Japanese patent document JP 10-296472 ("Goto").
- Rejection of claims 1, 3-4 and 9-13 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,258,242 ("Fujimori") and Goto, U.S. Patent No. 4,320,277 ("Tairi") and Goto, and U.S. Patent No. 4,684,779 ("Berlinger") and Goto.
- Rejection of claims 12-13 under § 103(a) as unpatentable over Goto, in view of U.S. Patent No. 6,399,915 ("Mori").

The following remarks are respectfully submitted to address each issue.

1. **The Rules Does Not Require An Oath As To Priority.** The Final Office Action contains a reassertion of the objection to the oath/declaration for not identifying the foreign priority application by application number, country, day, month and year of filing. August 8, 2007 Final Office Action at 2. In the Response to Arguments section, it is maintained that the Applicant's listing of the priority information in the Application Data Sheet filed with the Application is not sufficient to meet his requirement "because the data sheet is not a sworn Oath." *Id.* at 5.

The Applicant respectfully draws the Examiner's attention to the provisions of 37 C.F.R. § 1.63(c). This rule subsection explicitly states that the oath or declaration must identify any foreign application for patent for which priority is made "**UNLESS** such information is supplied on an application data

sheet in accordance with § 1.76.” (emphasis added). This is precisely how the Applicant provided the required priority information – in the ADS, not in the declaration, as permitted.

The Applicant further notes that there is no requirement in the rules that foreign priority data be attested to in the form of a formal oath or declaration (whether it is included with the rest of the information required in an oath/declaration, or it is included in an ADS). Indeed, this is what § 1.63 plainly contemplates, as nothing in § 1.63 (or in § 1.76, the ADS rule) begins to suggest the need for an oath for either the priority information or an application data sheet. Finally, the Applicant respectfully draws the Examiner’s attention to the fact that the form of submission of priority information in this case – in the ADS, not the declaration – is exactly the way priority information has been presented to the Office in untold thousands of patent applications over the years.

In view of the foregoing, the Applicant respectfully requests withdrawal of the pending oath/declaration objection.

2. The Goto Reference Does Not Disclose The Claimed Gases. The Applicant respectfully traverses the rejection of claims 1, 3-4 and 9 under § 102(b) as anticipated by Goto on the grounds that this reference does not disclose the claimed process gases.

It is maintained in the § 102 rejection that “Goto discloses laser welding of an aluminum tank having a gaseous shield of carbon dioxide and oxygen.” August 8, 2007 Final Office Action at 2. The pending claims expressly exclude oxygen from the claimed invention: claim 1 uses the transitional phrase

“consisting essentially of:” a term of art indicating the recited claim elements to the exclusion of other elements. *See, e.g.*, MPEP § 2111.03 (“The transitional phrase “consisting of” excludes any element, step, or ingredient not specified in the claim.”). Thus, where claim 1 recites a process gas which comprises mixtures of carbon dioxide, argon, and/or nitrogen, oxygen is excluded from any such mixture.

Accordingly, Goto’s mixture of oxygen and carbon dioxide does not disclose or suggest the invention recited in claim 1 and its dependent claims. Reconsideration and withdrawal of the § 102(b) rejection based on Goto is respectfully requested.

3. The Cited Welding References Are Directed to Very Different Welding Processes, And Cannot Be Casually Combined As Asserted. As previously noted the Applicant’s May 18, 2007 Amendment, the claimed process is directed to:

- *laser* welding using a *diode* laser (*i.e.*, a low-energy laser),
- welding *non-ferrous* metals (especially aluminum and aluminum alloys),
- with a process gas of CO₂-Ar or CO₂-N₂ or CO₂-Ar-N₂.

In the current § 103(a) rejections, the Final Office Action summarily states that it would have been obvious to (i) use a steel arc welding process (Fujimori and Taira) with Goto’s CO₂ range, (ii) use a hybrid arc and high-power laser welding process (Berlinger) with Goto’s carbon dioxide range, based on nothing more than the assertion that in each combination “both [references] are directed to welding using a shielding environment,” and without addressing what would

motivate the selective extraction of carbon dioxide from Goto's carbon dioxide/oxygen gas mixture.

The Applicants respectfully request reconsideration of these rejections, on the grounds that a *prima facie* case of obviousness has not been established by the mere assertion that the references are in the same field of "welding using a shielding environment."

As Supreme Court recently reiterated the *KSR International Co. v. Teleflex, Inc.* decision, and as again emphasized in the Office's recently issued Examination Guidelines for determining obviousness, the Examiner must (1) determine the scope and content of the prior art, (2) ascertain the differences between the claimed invention and the prior art, and (3) *resolve the level of ordinary skill in the pertinent art.* USPTO Examination Guidelines, 72 Fed. Reg. 57527, October 10, 2007 (citing *KSR*; emphasis added). Importantly, as the Examination Guidelines also reiterate, the Examiner must "[c]learly set[] forth findings of fact and rationale(s) to support a rejection." *Id.*

The Applicant respectfully submits that in the present case, there has been no attempt to ascertain the level of skill in the welding arts (and certainly no articulation as to the knowledge of one of ordinary skill in the record), and that the summary assertion that such critical welding constituents can be freely interchanged can only be presented by *disregarding the well known knowledge in the art of the unpredictability of welding results from minute changes in*

*process parameters*¹ – let alone wholesale interchange of weld energy sources, process gases and target materials (such as with selectively mixing the elements of the Goto, Fujimori, Taira and Berlinger references).

Accordingly, the Applicant submits that the mere assertion that it is obvious to mix the cited weld energy sources with selective gas constituents “because [the cited references] are directed to welding using a shielding environment,” without consideration of the knowledge of those of ordinary skill in the welding arts, is not a sustainable grounds for rejection.²

In view of the foregoing, the Applicant respectfully requests withdrawal of the pending § 103(a) rejections.³

¹ Indeed, the summary assertion offered to support the pending § 103(a) rejections is directly contrary to the common knowledge in the welding arts that such diverse welding energy sources, process gas concentrations and target materials can *not* be readily interchanged with a reasonable expectation of obtaining successful weld results, *i.e.*, those of ordinary skill in the welding arts – having experience with the highly complicated interaction of energy input to the weld zone, target material behavior in response to the energy input, and various chemical reactions between the gases themselves and in the weld plasma (where for example small changes in weld energy fed through the welding machine and small “tweaks” of the gas concentrations can make the difference between satisfactory and unacceptable welds in difficult to weld materials) – would *never* assume that any process gas from a fundamentally different type of welding process (*e.g.*, arc vs. high-power laser vs. low-power laser welding) could be so casually combined, particularly where extraordinary diverse target materials (*e.g.*, steel vs. aluminum) are involved.

² Carried to its logical conclusion, the summary reason offered to support the pending rejections amounts to a declaration that essentially no new weld process using existing elements can be patentably distinct from the prior art, because if, as asserted here, gases and weld process types can be so readily interchanged, virtually every new combination of existing welding gas, energy source and target material would be deemed obvious, simply because the prior art is “directed to using a shielding environment.” This plainly is not correct, as it ignores the knowledge of those in the art.

³ In any event, in view of the lack of consideration of all of the factors required to be considered under *KSR* and the Office’s Examination Guidelines (and the articulation of this consideration of these factors in the record in a manner sufficient to permit adequate review), the Applicant respectfully submits that if a next Office Action is issued in this case, it should not be made final.

CONCLUSION

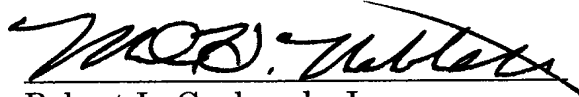
In view of the foregoing, the Applicant respectfully submits that claims 1, 3-4, 9 and 12-13 are in condition for allowance. Early and favorable consideration and issuance of a Notice of Allowance for these claims is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038724.52699US).

Respectfully submitted,

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Robert L. Grabarek, Jr.
Registration No. 40,625
Mark H. Neblett
Registration No. 42,028

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
RLG:MHN:tas
#3086798